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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,697	10/16/2003	Paul A. Kohl	62020-1550	7668
7590 Paul Reznick, Esq. THE WEBB LAW FIRM 700 Koppers Building 436 Seveth Avenue Pittsburgh, PA 15219			EXAMINER LEE, SIN J	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 02/19/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/686,697

**Applicant(s)**

KOHLE ET AL.

**Examiner**

Sin J. Lee

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9, 13-17 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9, 13-17 and 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. In view of the amendment, previous 112, second paragraph rejection on claims 13-17 and 20-22 and previous 102(b) rejection on claim 9 over Otani et al (JP'419) are hereby withdrawn.
2. Applicant's amendment on present claims 9 and 13 (in present claim 13, the removal of the "exposed" portions of the polymer composition is no longer required) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

3. It is to be noted that the effective filing date of present claim 9 is October 16, 2003 because the provisional application 60/418,930 does not provide adequate support for the present compound, 2-benzyl-2-dimethylamino-1-(4-mopholinophenyl)-butanone-1.

***Claim Rejections - 35 USC § 102***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Teng (US 6,410,208 B1).

In Example 5, Teng teaches a thermo-deactivatable photosensitive layer comprising a thermo-deactivatable photopolymer formulation and a photoinitiator, 2-benzyl-2-N,N-dimethylamino-1-(4-morpholinophenyl)-1-butanone. Thus, Teng teaches present invention of claim 9.

6. Claims 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Mastrangelo et al (6,136,212).

Mastrangelo's Fig.3 teaches a microfluidic device with an open channel. Since present claims 20-22 are written in product-by-process claim languages, Mastrangelo's microfluidic device teaches present inventions of claims 20-22.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 13-17 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mastrangelo et al (6,136,212) in view of Lee et al (6,107,000).

Mastrangelo teaches a microfluidic device with an open channel. See Fig.3, col.5, lines 55-67, col.6, lines 1-13 and claim 13; A thick polymer layer(such as photoresist polymeric material) is deposited and photolithographically defined onto a substrate. Next a second polymer is deposited serving as the walls of the channels. The first polymer is then sacrificially etched leaving a channel behind. Even though in Mastrangelo, a three dimensional structure (made from the photoresist material) is formed photolithographically onto a substrate, Mastrangelo does not teach the use of a gray scale photomask. Lee teaches that by using a gray scale mask in fabricating micro-devices, one can avoid the alignment errors resulting from processes requiring the use of multiple binary masks (see col.2, lines 17-23). Since Mastrangelo does not specify the type of mask he uses for the photolithography process, it would have been obvious to one skilled in the art to use a gray scale mask in exposing Mastrangelo's photoresist material (the first polymer layer) to form the three dimensional structure formed onto a substrate so as to avoid the alignment errors as taught by Lee. Thus, Mastrangelo in view of Lee render obvious present inventions of claims 13-17 and 20-22.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax

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phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sin J. Lee/

Primary Examiner, Art Unit 1795

February 13, 2008